



# UNITED STATES PATENT AND TRADEMARK OFFICE

*rm*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,422	11/14/2001	Glen Ragan	IO-1014US	5382

24923 7590 06/09/2003

PAUL S MADAN  
MADAN, MOSSMAN & SRIRAM, PC  
2603 AUGUSTA, SUITE 700  
HOUSTON, TX 77057-1130

EXAMINER

RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
----------	--------------

2856

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



# Office Action Summary

Applicant(s) *il*

09/914,422

RAGAN ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:



### DETAILED ACTION

1. New Claims 1-14 were renumbered to read claims 15-28, as claims must be consecutively numbered. (Rule 121) Also, the dependencies of only the new claims were corrected where obvious. (For example, Claim 16 now depends upon claim 15.) However, the dependencies of New Claims 25 and 26 remain unchanged as there were two claim 10s in the file. Also, the dependencies of original claims 10-14 remain unchanged because claims 10-14 obviously were depend upon original claims 1, 5 and 7, all of which are now cancelled.

2. The disclosure is objected to because of the following informalities: Data is missing on page 3, lines 29 and 30.

Appropriate correction is required.

3. Claims 15-28 and 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 15; "the output signals" lack antecedent basis. Also, doe "coupling" mean that the sensors are coupled together?

Claims 10-14, 25, 26 depend upon cancelled (base) claims.

As to claim 22; "external" to what?

As to claim 23; which features of the IEEE specification are intended to be related to the coupling, rotating, measuring and processing? Also, use of the IEEE item would appear to be an improper incorporation of subject matter by reference in a claim.



✓ Art Unit: 2856

As to claims 24, 27, 28; what subject matter in the specification and drawings does this claim refer back to?

4. Claims 10 to 28 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 15; the disclosure does not seem to how the coupling and rotation allows for a determination of calibration coefficients. The "calculating" (p. 5, line 31) does not appear to be provided. Also, how are these calibration coefficients used to provide for calibrated sensors?

As to claims 24, 27 and 28; how do the sensors operate such that the proof mass position is controlled at "two" locations? Can't there only be one position at any one time?

As to claim 28; how is a "control setting" determined ("determining")? Is the "setting" somehow related to the "calibration coefficients" (of claim 1)?

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15 -19, 27, 20, 21, 28 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ignagni in view of Kerr et al.



Art Unit: 2856

Ignagni teaches a method of calibrating a plurality of sensors (col. 10, line 35), each sensor have an axis of sensitivity, including: coupling the sensors within a single assembly 20; rotating ("rotation" on col. 9, line 24) the sensors; and determination of correction/scale/coefficient factors to be applied towards subsequent measuring.

Ignagni does not refer to "seismic" sensors.

As to claims 15, 17, 18, 19, 20, 23; it would have been obvious to employ Ignagni's system with "seismic" sensors because Kerr et al teaches a need to calibrate orthogonally mounted (col. 6, line 22) seismic sensors, and Ignagni's acceleration calibration system address orthogonal mounting type calibration of acceleration sensors.

As to claim 16; seismic sensors suggest any known accelerometer, including micro-machined.

As to claims 27, 28, 24; Kerr's seismic sensor suggests any known type of seismic sensor, including that which employs a proof mass.

As to claim 21, 22; Ignagni's system requires memory which is electrically connected to the sensors.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. \*

Mueller et al rotate sensors under test.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 703-305-4919. The examiner can normally be reached on Monday to Friday from 6:30am to



Application/Control Number: 09/914,422

Page 5

Art Unit: 2856

4:00pm. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

R. Chris  
AU 2856  
Examiner